Some people can do math, others just can’t. If you don’t ‘get’ something right away you’ll never be any good at it. If you fail a test, you’re probably just not cut out for that subject.

**Mindsets Research in Higher Education**

Systemic tendency to amplify fixed mindsets, especially in entry-level STEM subjects

Stereotypes feed fixed mindsets (e.g. women in computer science)

Fixed mindset students are more likely to switch majors, engage in self-sabotage behaviours (procrastination), and fail to seek help.

**Experimental Interventions**

Explicit interventions: students are taught about mindsets and their implications for learning

Stereotypes feed fixed mindsets (e.g. women in computer science)

Systemic tendency to amplify fixed mindsets, especially in entry-level STEM subjects

**Resources**


**Nurturing a Growth Mindset in Libraries**

Our students & library users

- Normalize effort
- Explain that it’s OK to not ‘get’ it right away
- Normalize help-seeking behaviour
- Encourage risk; embrace mistakes
- Expose your own vulnerabilities; acknowledge your own knowledge gaps
- Model strategies for overcoming initial failures (don’t limit demonstrations to examples that work out perfectly)
- Praise process/strategy/effort rather than personal attributes
- Explicitly describe productive ways to benefit from feedback

Ourselves and our colleagues

Strive for an organizational culture in which it is safe to experiment, seeking help from colleagues is encouraged, and failures are embraced as valuable and informative learning experiences.

**Implicit Self-Theories**

<table>
<thead>
<tr>
<th>Fixed Mindset</th>
<th>Growth Mindset</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fearful of exposing limitations</td>
<td>Value opportunity to learn from peers</td>
</tr>
<tr>
<td>Feedback</td>
<td></td>
</tr>
<tr>
<td>Viewed negatively and personally</td>
<td>Viewed positively and non-personally</td>
</tr>
<tr>
<td>Creativity/Problem-Solving</td>
<td></td>
</tr>
<tr>
<td>Inhibited by fear of failure and de-railed by unexpected mishaps</td>
<td>Enjoy testing ideas and adjusting strategies</td>
</tr>
</tbody>
</table>

"If I work hard and do well, I can show that I am smart."

"If I work hard I can learn more and get smarter."

"Helpless Response to Setbacks"

"Mastery Response to Setbacks"

"That approach didn’t work. I need a new strategy."

**Entity Theory of Intelligence**

**Incremental Theory of Intelligence**

**Fixed Mindset**

**Growth Mindset**

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**Research initiated by the social psychologist Carol Dweck and her colleagues has revealed that beliefs about intelligence affect learning.**

**Working in a 21st Century Library Demands a Growth Mindset**

- Change!
- Technology
- Learning new things
- Teaching
- Troubleshooting
- Problem solving & creativity
- Integrating feedback with practice